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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROBERT LEPAGE and MICHEL PARADIS

Appeal 2008-004700
Application 09/205,318
Patent 5,579,820
Technology Center 3600

Decided: August 25, 2009

Before ALLEN R. MACDONALD, *Vice Chief Administrative Patent Judge*,
FRED E. MCKELVEY, *Senior Administrative Patent Judge*, and
LINDA E. HORNER, *Administrative Patent Judge*.

HORNER, *Administrative Patent Judge*

DECISION ON APPEAL

Appeal 2008-004700
Application 09/205,318
Patent 5,579,820

STATEMENT OF THE CASE

Robert LePage and Michel Paradis (Appellants) seek our review under 35 U.S.C. § 134 of the Examiner's non-final rejection of January 29, 2003 in reissue application 09/205,318. The reissue application seeks to reissue U.S. Patent 5,579,820, issued December 3, 1996, based on Application 08/339,175, filed November 10, 1994. The reissue application contains claims 1-27. The Examiner has rejected claims 20-27, and has indicated claims 1-19 are allowable. We have jurisdiction under 35 U.S.C. § 6(b) (2002).

THE INVENTION

The Appellants' claimed invention is directed to a collapsible vehicle shelter made of assembled tubular members and cross members with a covering and a roll-up door for the opening at the front of the shelter. '820 patent, col. 1, ll. 6-11. Representative Figures 1 and 13 are reproduced below.

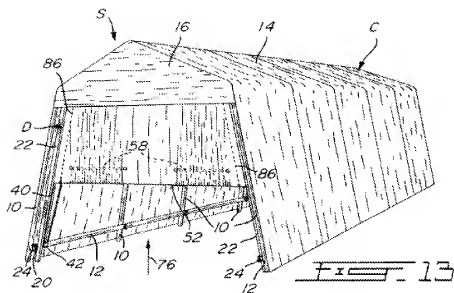
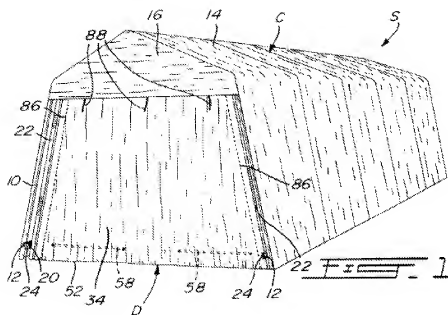


Figure 1 shows a perspective view of a collapsible vehicle shelter with a roll-up closure device (D) in the closed or blocking position. '820 patent, col. 3, ll. 42-45. Figure 13 shows a perspective view of the vehicle shelter and roll-up closure device (D), similar to Figure 1, but with the roll-up closure device (D) in a half-open or unblocking position. '820 patent, col. 4, ll. 5-8.

The roll-up closure device (D) includes a roller (32) adapted to be rotatably mountable adjacent an upper end of the door opening and a curtain (34) that is secured at its top end to the roller (32). '820 patent, col. 4, ll. 58-63; Figure 3. The closure device (D) also includes guide members (22) disposed at the lateral sides of the door opening, and guide engagement members (36 or 38) coupled to the curtain (34) for movement therewith and engageable with the guide members (22). '820 patent, col. 4, ll. 38-47 and col. 5, ll. 8-15. As shown in the Figures, the door opening has the shape of an isosceles trapezoid. '820 patent, col. 4, ll. 29-31. The guide members 22 extend similarly in a downwardly and slightly inclined way to follow the sides of the trapezoidal door opening. '820 patent, col. 4, ll. 37-40. The curtain (34) includes an upper straight section extending above the door opening and attached to the roller (32) and a lower flared section adapted to follow the shape of the door opening so that when the curtain (34) is closed, it completely closes off the trapezoidal door opening of the vehicle shelter. '820 patent, col. 4, l. 65 - col. 5, l. 4. The closure device (D) also includes elastic members (58) coupled to the curtain and disposed so that the elastic

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members (58) can be stretched laterally between the restricted guide engagement members (36 or 38). '820 patent, col. 5, ll. 40-47. Claims 20-27 on appeal read as shown in Appendix 4 attached.

THE REJECTION

The Appellants seek review of the Examiner's rejection of claims 20-27 under 35 U.S.C. § 251 as "being an improper recapture of broadened claimed subject matter surrendered in the application for the patent upon which the present reissue is based" (Non-Final Office Action dated January 29, 2003 at 2).

ISSUE

The Examiner found that the Appellants argued during prosecution of the patent that the claimed diverging sides of the closure and the diverging guide means distinguished the claims over the prior art and rendered the claims allowable, and that by removing these features from reissue claims 20-27, the Appellants are attempting to recapture surrendered subject matter (Non-Final Office Action dated January 29, 2003 at 3-4; Ans. 3-5).

The Appellants acknowledge that independent reissue claims 20 and 26 remove the recitations of: (1) a door opening having lateral sides "which diverge from top to bottom," (2) guide means adapted to be mounted to the vehicle shelter substantially at the lateral side of the door opening and substantially parallel thereto "thereby diverging from top to bottom," and

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(3) the closure means “having a shape which tapers in a direction of said roller means.” App. Br. 9. The Appellants argue that “the entirety of the prosecution history suggests that diverging lateral sides on screens and tracks were arguably in the prior art in some form, just clearly not in a form invalidating the novel combination claimed by the applicants.” App. Br. 15. The Appellants contend that “[t]he examiner’s suggestion that diverging sides were the only features relied upon in the original prosecution is factually in error.” *Id.*

The issue presented by this appeal is:

Have the Appellants established that the Examiner erred in rejecting claims 20-27 under 35 U.S.C. § 251 based on recapture because the Appellants did not surrender the subject matter of these claims during prosecution of the patent for which reissue is now sought?

FINDINGS OF FACT

Prosecution history of the original application

1. As filed, original application 08/339,175 contained claim 1 directed to a roll-up closure device. A copy of originally-filed claim 1 is attached as Appendix 1.
2. On February 29, 1996, the Examiner entered a Non-Final Office Action (“Original Non-Final Action”).
3. The Original Non-Final Action rejected claim 1 under 35 U.S.C. § 112, second paragraph, as being indefinite and under 35 U.S.C.

§ 102(b) as being anticipated by Belgian Patent No. 533251 to Wellens, published November 30, 1954.

4. The Original Non-Final Action also listed the following pertinent prior art:

Germann	US 2,594,910	Apr. 29, 1952
Lamb	US 3,051,232	Aug. 28, 1962
Domicent	US 4,231,289	Nov. 4, 1980
Klose	US 4,979,775	Dec. 25, 1990
Ojima	US 5,201,810	Apr. 13, 1993
Czowalla	DE 38 41 139 A1	Jun. 13, 1990
5. On May 30, 1996, Appellants filed an Amendment in response to the Original Non-Final Action ("the Amendment").
6. The Amendment amended claim 1 and added new dependent claims 2-19. A copy of the claims, as amended, is attached as Appendix 2.
7. After entry of the Amendment, the application claims were 1-19.
8. In the Amendment, Appellants presented arguments with respect to the patentability of amended claim 1.
9. In response to the rejection of claim 1 as being indefinite, the Appellants argued at page 5 of the Amendment:

In response to the objection to Claim 1 under 35 U.S.C. § 112, Applicant has herein amended Claim 1, as requested by the Examiner, to remove therefrom any limitation of the claimed closure device related to the vehicle shelter. Some minor clerical amendments have also been made to ensure proper antecedent basis throughout Claim 1.

10. In response to the rejection of claim 1 as being anticipated by Wellens, the Appellants argued at page 6 of the Amendment:

[A]s opposed to the present invention, the window opening in Wellens is rectangular and the section of the screen 1 which closes the window opening is thus also rectangular. ... In the present invention, the section closing the trapezoid opening is complementary in shape thereto and thus cannot be fairly compared to the Wellens system. In fact, Claim 1 is considered to clearly distinguish from the Belgium Patent by claiming that the section of the flexible closure closing the shelter opening has side edges tapering towards the overhead roller provided at the narrow end of the shelter opening.

11. The Appellants also voluntarily submitted comments discussing and distinguishing the additional references cited by the Examiner as containing “pertinent” disclosures. Amendment 6-8.
12. With regard to the cited art, the Appellants stated on page 8 of the Amendment:

Claim 1 has been herein amended in order to clearly distinguish from the citations and, more particularly, by reciting that the flexible closure includes a tapering section adapted to substantially completely close the door opening and to wind around an overhead roller provided at the upper, i.e. narrow, end of the door opening, as opposed to the cited references, including the Klose Patent which does not have guide means mounted at *each* lateral side of the trapezoid opening and which fails to *completely* obstruct the windshield with its

window shade (see important central gap, when closed), and including the Belgium Patent to Wellens which only requires a *rectangular* screen section to close the window opening.

13. The Appellants further stated, in summary, on page 8 of the Amendment:

Therefore, amended Claim 1 distinguishes from Germann as the latter discloses a rectangular flexible cover which winds at its large end; from Ojima et al. and DE-38 41 139-A1 which teach tapered sun-blinds having wind-up rollers at their large ends; from Klose which requires two window shades and which leaves a significant gap therebetween; and from the Belgium Patent to Wellens which discloses a screen which is rectangular where it closes the window opening. Accordingly, on the basis of the prior art, the claims have been amended to reflect the above-described differences of the present invention over the cited documents.

14. In particular, the Appellants noted that the Ojima reference and DE 38 41 139 A1 both disclose trapezoidal-shaped openings that flare from top to bottom. Amendment, p. 7. Further, we find that DE 38 41 139 A1 discloses the rails 6 and the blind 1 diverge from top to bottom. DE 38 41 139 A1, Figure and Abstract. We also find that Ojima discloses guide means 14 and a screen sheet 12 that diverge from top to bottom. Ojima, Figure 14.
15. On June 11, 1996, the Office mailed a Notice of Allowability, which included an Examiner's amendment to claim 1 and allowed

claims 1-19. The Examiner's amendment added that the guide means diverge from top to bottom (shown by the underlined text in claim 1 as reproduced in Appendix 3). The Notice of Allowability did not provide any reasons for this amendment or any reasons for allowance of the claims.

16. Application claims 1-19 correspond to patent claims 1-19, respectively.
17. U.S. Patent 5,579,820 issued December 3, 1996 based on the original application, and contained claims 1-19, copies of which are found in attached Appendix 3.

Prosecution history of the reissue application

18. Appellants filed reissue application 09/205,318 on December 3, 1998¹, seeking to reissue U.S. Patent 5,579,820.
19. Appellants presented unamended original patent claims 1-19 along with new reissue application claims 20-27 for consideration.
20. Appellants subsequently amended claims 20 and 26 on February 19, 2002 and January 13, 2003.
21. Reissue application claims 20-27 before the Board in this appeal are provided in Appendix 4.

¹ The applicant was initially accorded a filing date of December 4, 1998, but was subsequently accorded a filing date of December 3, 1998 in a Decision Granting Petition, mailed March 27, 2000.

Independent Reissue Claims on Appeal

22. The Appellants admit that reissue claims 20-27 are “directed to a broader class of closure devices that may be used on structures other than vehicle shelters and on door openings other than those that diverge from top to bottom.” App. Br. 8. In particular, the Appellants acknowledge that independent claims 20 and 26 “exclude any preamble reference to a vehicle shelter, and both exclude the reference to a door opening having lateral sides ‘which diverge from top to bottom.’” App. Br. 9. The Appellants further acknowledge that independent claims 20 and 26 also exclude certain positively recited limitations, including guide means adapted to be mounted to the vehicle shelter substantially at the lateral sides of the door opening and substantially parallel thereto “thereby diverging from top to bottom,” and closure means “having a shape which tapers in direction of said roller means.” *Id.*

PRINCIPLES OF LAW

What has become known as the “recapture rule,” prevents a patentee from regaining through a reissue patent subject matter that the patentee surrendered in an effort to obtain allowance of claims in the patent sought to be reissued. *In re Clement*, 131 F.3d 1464, 1468 (Fed. Cir. 1997).

If a patentee attempts to “recapture” what the patentee previously surrendered in order to obtain allowance of original patent claims, that

“deliberate withdrawal or amendment ... cannot be said to involve the inadvertence or mistake contemplated by 35 U.S.C. § 251, and is not an error of the kind which will justify the granting of a reissue patent which includes the [subject] matter withdrawn.” *Mentor Corp. v. Coloplast, Inc.*, 998 F.2d 992, 995 (Fed. Cir. 1993) (quoting *Haliczer v. United States*, 356 F.2d 541, 545 (Ct. Cl. 1966)); *see also Hester Industries Inc. v. Stein, Inc.*, 142 F.3d 1472, 1480 (Fed. Cir. 1998).

The Federal Circuit's opinion in *Clement* discusses a three-step test for analyzing recapture.

Step 1 involves a determination of whether and in what aspect any claims sought to be reissued are broader than the patent claims. The Federal Circuit reasoned that a reissue application claim deleting a limitation or element from a patent claim is broader as to that limitation's or element's aspect. 131 F.3d at 1468.

Step 2 involves a determination of whether the broader aspects of the reissue application claims relate to surrendered subject matter. 131 F.3d at 1468-69. In this respect, review of arguments and/or amendments during the prosecution history of the application, which matured into the patent sought to be reissued, is appropriate. 131 F.3d at 1469.

Step 3 of the *Clement* test is applied when the broadening relates to surrendered subject matter and involves a determination whether the surrendered subject matter has crept into the reissue application claim. *Id.*

We elaborate a bit more on Step 2 of the *Clement* test, as the Examiner’s analysis under this step is the heart of the contention on appeal. The Federal Circuit in *Hester* held that arguments made to overcome the prior art can alone evidence an admission sufficient to give rise to impermissible recapture. 142 F.3d at 1481.

The court in *Hester* noted:

[T]he reissue statute is “based on fundamental principles of equity and fairness.” *Weiler*, 790 F.2d at 1579, 229 USPQ at 675. There is no unfairness in binding the patentee to deliberate assertions made in order to obtain allowance of the original patent claims over the prior art. Indeed, fairness to the public must also be considered. In this regard, as stated in *Mentor*, “the reissue statute cannot be construed in such a way that competitors, properly relying on prosecution history, become patent infringers when they do so.” 998 F.2d at 996, 27 USPQ2d at 1525. The recapture rule operates to prevent this from happening. *See id.* Furthermore, as recognized in *Ball*, the recapture rule is based on principles of equity and therefore embodies the notion of estoppel. 729 F.2d at 1439, 221 USPQ at 296.

Id. at 1481. The court in *Hester* analogized argument-based surrender in the reissue context to the rule of argument-based surrender in the prosecution history estoppel context. *Id.* (citing to *Warner-Jenkinson v. Hilton Davis Chem. Co.*, 520 U.S. 17 (1997)). For such argument-based estoppel, the question is whether a “reasonable competitor” would have known that the

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subject matter was being relinquished. *Hoganas AB v. Dresser*, 9 F.3d 948 (Fed. Cir. 1993).

ANALYSIS

The Appellants do not dispute the Examiner's determination according to step 1 of the *Clement* test that the rejected reissue claims are broader than the issued patent claims because they omit a guide means "diverging from top to bottom" and closure means "having a shape which tapers in direction of said roller means" (Fact 21).

The Appellants argue that the Examiner erred in rejecting reissue claims 20-27 under 35 U.S.C. § 251 because the Examiner erred in determining, according to step 2 of the *Clement* test, that these broader aspects of the reissue application claims relate to surrendered subject matter (App. Br. 13-15). The Examiner determined that "[t]he critical limitations that are present in the patent claims (5,579,820) that Appellant [sic] is attempting to remove from the present claims are the tapering of the closure (roller door) and the guide means which diverge from top to bottom, both of which are related since the closure conforms to the guides." Supp. Ans. 3.

To review this determination by the Examiner, we review the Appellants' arguments and amendments made during the prosecution history of the original application, which matured into the patent sought to be reissued.

During prosecution of the original application, the Appellants amended original claim 1 (Facts 5-6) (Appendix 2). The Appellants' amendment deleted the limitation that the flexible closure has a shape that is substantially complementary to that of the door opening with lateral sides which diverge from top to bottom. In place of this deleted limitation, the Appellants substituted a limitation that the flexible closure means² has a shape which tapers in direction of the roller means, which is located adjacent an upper end of the door opening (Fact 6) (Appendix 2).³ The Examiner subsequently added by Examiner's amendment the limitation that the guide means diverge from top to bottom (Fact 15) (Appendix 3). The Examiner did not provide any reasons for this amendment and did not provide any Reasons for Allowance of the claims (Fact 15).

The Examiner's analysis in the Non-Final Rejection of January 29, 2003, the Examiner's Answer of September 23, 2003, and the Supplemental Examiner's Answer of June 8, 2005 based the finding of surrender on the remarks and arguments presented by the Appellants during prosecution of

² The Appellants amended claim 1 in several locations to add the word "means" to the flexible closure recitation to provide proper antecedent basis.

³ The Appellants further added a limitation to claim 1 to recite that in the closed position, the tapered section of the flexible closure means substantially completely closes the door opening. The Examiner has not determined that the Appellants' reissue claims 20-27, which recite that the closure device is movable between blocking and unblocking positions relative to a door opening, attempts to recapture this subject matter added by amendment.

the original patent claims, and did not find that the Appellants surrendered subject matter by amending claim 1 in response to the Office Action or in agreeing to the Examiner's amendment of claim 1. In fact, the Examiner acknowledges in the Supplemental Examiner's Answer that the limitations of the tapering closure and the diverging guide means "were present in the originally filed patent claims in some form." Supp. Ans. 3. While the Examiner further states that these limitations "were further amended (narrowed) by the patent owner on 5/30/96 [in the Reply to the First Office Action]," the remainder of the Examiner's analysis focuses only on the remarks made by the Appellants in the Reply to the First Office Action as the basis for his determination that subject matter had been surrendered. The Examiner does not appear to rely on an analysis comparing the original claim language to the claim as amended to identify the scope of any subject matter surrendered by amendment. The Appellants rely on the Examiner's omission of such an analysis. App. Br. 10 ("The examiner acknowledges that there was no surrender by amendment or by cancellation – the subject matter now sought was never claimed."). We refrain from engaging in an analysis in our review to determine whether, and to what extent, claim 1 may have been narrowed by amendment, since the Examiner did not make a definitive determination on this issue, and the Examiner's finding of surrendered subject matter does not appear to rely on surrender by amendment.

We now turn to a review of the arguments presented by the Appellants. The Appellants presented arguments to distinguish the claimed closure device from seven different prior art references cited by the Examiner (Facts 10-13). With regard to the Belgian Patent 533251 and the U.S. Patent to Germann, the Appellants argued that the claimed closure device differed from the devices shown in the prior art, because the prior art devices were rectangular covers (Facts 10, 13). With regard to Ojima and the German patent publication DE 38 41 139 A1, the Appellants argued that although these prior art references show a trapezoidal-shaped opening with a correspondingly-shaped closure, the claimed closure device differed from these prior art devices, because the prior art closures have wind-up rollers at their large ends, whereas the claim requires the roller means to be disclosed adjacent an upper (narrower) end of the door opening (Facts 13 & 14). With regard to Klose, the Appellants argued that although Klose discloses two shade strips each shaped as a rectangular trapezoid and each wound around a roller provided at the upper, narrow end of the windshield to be covered, the claimed closure device differs from the device of Klose, because the shade strips of Klose do not substantially completely cover the windshield (Fact 13). As such, the Appellants argued that it was the combination of the flexible closure including a tapering section adapted to substantially completely close the door opening and to wind around an overhead roller provided at the upper, i.e. narrow, end of the door opening that distinguished the claimed closure device from the prior art (Fact 12). The Appellants'

arguments did not focus on any one individual limitation, but rather relied on the combination of limitations to distinguish the claimed invention over the prior art. In particular, the arguments did not rely solely on the limitation of a tapering closure, because this limitation is present in the Ojima and German Publication No. DE 38 41 139A1 references (Fact 14). The Appellants arguments also did not rely on the limitation of guide means diverging from top to bottom because this limitation was added by the Examiner after the Appellants had presented their arguments in the Reply to the Office Action (Fact 15). A reasonable competitor reviewing the original prosecution history of the '820 patent would have known from the arguments presented by Appellants that it was the combination of limitations present in claim 1 that distinguished the claimed invention over the prior art, and the Appellants' did not rely only on the limitation of a tapering closure, which was already known in the prior art.

Because we find that the Appellants have not surrendered the subject matter as determined by the Examiner, we do not need to reach step 3 of the *Clement* test.

CONCLUSION

The Appellants have established that the Examiner erred in rejecting claims 20-27 under 35 U.S.C. § 251 based on recapture because the Appellants did not surrender the subject matter of these claims during prosecution of the patent for which reissue is now sought.

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Patent 5,579,820

DECISION

The decision of the Examiner to reject claims 20-27 is REVERSED.

REVERSED

Vsh

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APPENDIX 1

*Claim of Original Patent Application 09/205,318,
as filed on November 10, 1994*

1. A roll-up closure device typically for use on vehicle shelters of the type defining at a front end thereof a door opening having lateral sides which diverge from top to bottom, comprising a pair of guide means adapted to be mounted to the vehicle shelter substantially at the lateral sides of the door opening and substantially parallel thereto, an overhead roller means adapted to be rotatably mounted inside the vehicle shelter and substantially horizontally above the door opening, a flexible closure means adapted to be secured at a top end thereof to said roller means, at least a section of said flexible closure having a shape substantially complementary to that of the door opening and including diverging lateral side edges adapted to be engaged in said guide means, whereby a rotation of said roller means causes said flexible closure to displace along said guide means and to wind around said roller means or to unwind therefrom for displacing said flexible closure towards an open or a closed position thereof, respectively.

APPENDIX 2

*Claims of Original Patent Application 09/205,318,
as Amended on May 30, 1996*

(matter underlined added by the amendment)
(matter in [brackets] deleted by the amendment)

1. A roll-up closure device typically for use on vehicle shelters of the type defining at a front end thereof a door opening having lateral sides which diverge from top to bottom, comprising a pair of guide means adapted to be mounted to the vehicle shelter substantially at the lateral sides of the door opening and substantially parallel thereto, an overhead roller means adapted to be rotatably mounted inside the vehicle shelter and substantially horizontally adjacent an upper end of [above] the door opening, a flexible closure means adapted to be secured at a top end thereof to said roller means, at least a section of said flexible closure means having a shape which tapers in direction of said roller means [substantially complementary to that of the door opening] and including diverging lateral side edges adapted to be engaged in said guide means, whereby a rotation of said roller means causes said flexible closure means to displace along said guide means and to wind around said roller means or to unwind therefrom for displacing said flexible closure means towards an open or a closed position thereof, respectively, wherein in said closed position, said section of said flexible closure means substantially completely closes the door opening.

2. A closure device as defined in Claim 1, wherein said roller means comprise winding means adapted to take up substantially triangular lateral end portions of said section such that when said flexible closure means is in a rolled attitude around said roller means, said flexible closure means defines substantially concentric and cylindrical layers of varying axial width.

3. A closure device as defined in Claim 2, wherein said roller means comprise a rotatable shaft with said top end of said flexible closure

means being attached thereto, a pair of pulley means mounted at ends of said shaft, cable means being engaged to said pulley means and secured to said flexible closure means such that a rotation of said shaft and pulley means cause said cable means to displace thereby displacing said flexible closure means.

4. A closure device as defined in Claim 3, wherein each said pulley means comprise first pulley having an outwardly flaring bottom for receiving said lateral side edges of said flexible closure means in an axially outwardly staggered relationship therearound for maintaining substantially taut said cylindrical layers of said section in said rolled attitude.

5. A closure device as defined in Claim 4, wherein said cable means are connected to said pulley means such as to define closed loops, each said pulley means comprising a second pulley adjacent said first pulley, each said cable means being secured to both said first and second pulley such that a rotation of said pulley means causes said cable means to wind around one of said first and second pulleys and to unwind from another one of said first and second pulleys.

6. A closure device as defined in Claim 4, wherein said first pulley is frusto-conical shaped.

7. A closure device as defined in Claim 5, wherein a third pulley engaged by said cable means is provided at a lower end of each said guide means, whereby when said flexible closure means is displaced towards said closed position thereof, said flexible closure means and said cable means attached thereto unwind from said first pulleys with said cable means being also wound around said second pulleys while driving said flexible closure means downwardly along said guide means such as to substantially completely close the door opening; whereas when said flexible closure means is displaced towards said open position thereof, said flexible closure means and said cable means attached thereto wind around said first pulleys while upwardly pulling said flexible closure means along said guide means with said cable means being also unwound from said second pulleys.

8. A closure device as defined in claim 5, wherein said second pulleys are slightly angled outwardly towards said guide means for cleanly receiving said cable means therein during rotation of said roller means towards said closed position.

9. A closure device as defined in claim 5, wherein said cable means are each provided with binding means to ensure sufficient tension therein during rotation of said roller means.

10. A closure device as defined in claim 1, wherein said flexible closure means is provided with elastic means extending substantially laterally at least adjacent said side edges to ensure that said flexible closure means remains substantially taut during rotation of said roller means.

11. A closure device as defined in claim 10, wherein said guide means each comprise a tubular member adapted to be mounted to the lateral sides defining the door opening of the vehicle shelter and inwardly defining a longitudinal slot, said lateral side edges of said flexible closure means being engaged in said tubular members and inwardly extending therefrom through said slots, said elastic means maintaining said side edges substantially taut at said slots.

12: A closure device as defined in claim 11, wherein each said guide means comprise sealing means mounted to said tubular member at said slot and at least on one side of said lateral side edges of said flexible closure means.

13. A closure device as defined in claim 1, wherein reversible motor means are provided for driving said roller means.

14. A closure device as defined in claim 1, wherein first detachable fastening means are provided on said flexible closure means inwardly of each said lateral side edge thereof for allowing said flexible closure means to be manually opened in the event that said roller means cannot be rotated or that said flexible closure means is jammed to said guide means.

15. A closure device as defined in claim 14, wherein second detachable fastening means are provided for securing said flexible closure means in an open position when having been manually opened using said first detachable fastening means.

16. A closure device as defined in claim 15, wherein said first detachable fastening means comprise zippers, and wherein said second detachable fastening means comprise strap means.

17. A closure device as defined in claim 1, wherein said flexible closure means extends substantially planarly across the door opening when in said closed position.

18. A closure device as defined in claim 11, wherein said lateral side edges of said flexible closure means are each secured opposite said elastic means to a sliding block means engaged in said tubular member for ensuring that said flexible closure means can displace along said guide means even with forces applied inwardly on said lateral side edges by said elastic members.

19. A closure device as defined in claim 18, wherein each said sliding block means comprises a pulley engaged by said cable means and mounted at a distance a lower end of said lateral side edge of said flexible closure means being mounted to said lower end of said sliding block means, said lower end of said sliding block means being adapted to extend in said guide means at least close to the ground in said closed position such that a lower edge of said flexible closure means extends at least close to the ground whereby said pulley, being mounted fairly above the ground, and said cable means are not as vulnerable to jamming due to ice built-ups with said sliding block means ensuring that said flexible closure means extends firmly downwards to the ground.

APPENDIX 3

Claims of Patent 5,579,820, as Issued on December 3, 1996

(matter underlined added by Examiner's amendment)

1. A roll-up closure device typically for use on vehicle shelters of the type defining at a front end thereof a door opening having lateral sides which diverge from top to bottom, comprising a pair of guide means adapted to be mounted to the vehicle shelter substantially at the lateral sides of the door opening and substantially parallel thereto thereby diverging from top to bottom, an overhead roller means adapted to be rotatably mounted inside the vehicle shelter and substantially horizontally adjacent an upper end of the door opening, a flexible closure means adapted to be secured at a top end thereof to said roller means, at least a section of said flexible closure means having a shape which tapers⁴ in direction of said roller means and including diverging lateral side edges adapted to be engaged in said guide means, whereby a rotation of said roller means causes said flexible closure means to displace along said guide means and to wind around said roller means or to unwind therefrom for displacing said flexible closure means towards an open or a closed position thereof, respectively, wherein in said closed position, said section of said flexible closure means substantially completely closes the door opening.
2. A closure device as defined in Claim 1, wherein said roller means comprise winding means adapted to take up substantially triangular lateral end portions of said section such that when said flexible closure means is in a rolled attitude around said roller means, said flexible closure means defines substantially concentric and cylindrical layers of varying axial width.
3. A closure device as defined in Claim 2, wherein said roller means comprise a rotatable shaft with said top end of said flexible closure means

⁴ This word should read "tapers." There was an error in the printing of the issued patent.

being attached thereto, a pair of pulley means mounted at ends of said shaft, cable means being engaged to said pulley means and secured to said flexible closure means such that a rotation of said shaft and pulley means cause said cable means to displace thereby displacing said flexible closure means.

4. A closure device as defined in Claim 3, wherein each said pulley means comprise first pulley having an outwardly flaring bottom for receiving said lateral side edges of said flexible closure means in an axially outwardly staggered relationship therearound for maintaining substantially taut said cylindrical layers of said section in said rolled attitude.
5. A closure device as defined in Claim 4, wherein said cable means are connected to said pulley means such as to define closed loops, each said pulley means comprising a second pulley adjacent said first pulley, each said cable means being secured to both said first and second pulley such that a rotation of said pulley means causes said cable means to wind around one of said first and second pulleys and to unwind from another one of said first and second pulleys.
6. A closure device as defined in Claim 4, wherein said first pulley is frusto-conical shaped.
7. A closure device as defined in Claim 5, wherein a third pulley engaged by said cable means is provided at a lower end of each said guide means, whereby when said flexible closure means is displaced towards said closed position thereof, said flexible closure means and said cable means attached thereto unwind from said first pulleys with said cable means being also wound around said second pulleys while driving said flexible closure means downwardly along said guide means such as to substantially completely close the door opening; whereas when said flexible closure means is displaced towards said open position thereof, said flexible closure means and said cable means attached thereto wind around said first pulleys while upwardly pulling said flexible closure means along said guide means with said cable means being also unwound from said second pulleys.

8. A closure device as defined in claim 5, wherein said second pulleys are slightly angled outwardly towards said guide means for cleanly receiving said cable means therein during rotation of said roller means towards said closed position.

9. A closure device as defined in claim 5, wherein said cable means are each provided with binding means to ensure sufficient tension therein during rotation of said roller means.

10. A closure device as defined in claim 1, wherein said flexible closure means is provided with elastic means extending substantially laterally at least adjacent said side edges to ensure that said flexible closure means remains substantially taut during rotation of said roller means.

11. A closure device as defined in claim 10, wherein said guide means each comprise a tubular member adapted to be mounted to the lateral sides defining the door opening of the vehicle shelter and inwardly defining a longitudinal slot, said lateral side edges of said flexible closure means being engaged in said tubular members and inwardly extending therefrom through said slots, said elastic means maintaining said side edges substantially taut at said slots.

12. A closure device as defined in claim 11, wherein each said guide means comprise sealing means mounted to said tubular member at said slot and at least on one side of said lateral side edges of said flexible closure means.

13. A closure device as defined in claim 1, wherein reversible motor means are provided for driving said roller means.

14. A closure device as defined in claim 1, wherein first detachable fastening means are provided on said flexible closure means inwardly of each said lateral side edge thereof for allowing said flexible closure means to be manually opened in the event that said roller means cannot be rotated or that said flexible closure means is jammed to said guide means.

15. A closure device as defined in claim 14, wherein second detachable fastening means are provided for securing said flexible closure means in an open position when having been manually opened using said first detachable fastening means.

16. A closure device as defined in claim 15, wherein said first detachable fastening means comprise zippers, and wherein said second detachable fastening means comprise strap means.

17. A closure device as defined in claim 1, wherein said flexible closure means extends substantially planarly across the door opening when in said closed position.

18. A closure device as defined in claim 11, wherein said lateral side edges of said flexible closure means are each secured opposite said elastic means to a sliding block means engaged in said tubular member for ensuring that said flexible closure means can displace along said guide means even with forces applied inwardly on said lateral side edges by said elastic members.

19. A closure device as defined in claim 18, wherein each said sliding block means comprises a pulley engaged by said cable means and mounted at a distance a lower end of said lateral side edge of said flexible closure means being mounted to said lower end of said sliding block means, said lower end of said sliding block means being adapted to extend in said guide means at least close to the ground in said closed position such that a lower edge of said flexible closure means extends at least close to the ground whereby said pulley, being mounted fairly above the ground, and said cable means are not as vulnerable to jamming due to ice built-ups with said sliding block means ensuring that said flexible closure means extends firmly downwards to the ground.

APPENDIX 4

Independent Claims of Reissue Application 09/761,915, as Appealed

20. A roll-up closure device adapted to be disposed adjacent a door opening and movable between blocking and unblocking position relative thereto, and comprising:
- a roller adapted to be rotatably mountable adjacent an upper end of the door opening:
 - a curtain adapted to be secured at a top end thereof to the roller whereby rotation of the roller causes the curtain to wind or unwind from the roller to move between unblocking and blocking positions, respectively:
 - guide members adapted to be disposed at the lateral sides of the door opening:
 - guide engagement members couplable to the curtain for movement therewith and engageable with the guide members to restrict their movement toward the curtain center: and
 - a discrete elastic member coupled to the curtain for movement therewith extending laterally across the curtain, and disposed such that the elastic member can be stretched laterally between the restricted guide engagement members.
21. The device of claim 20, wherein opposed ends of the elastic member are coupled to the curtain, and the restricted guide engagement members are coupled to the lateral edges of the curtain, an increased lateral separation of the guide engagement members exerting a pulling force on the curtain tending to stretch the elastic member.
22. The device of claim 20, wherein the elastic member can be stretched to allow the curtain to yield to an applied external force without rupturing.
23. The device of claim 20, wherein the guide engagement members are cables extending along the lateral edge of the curtain and received in a pocket formed therein.

24. The device of claim 20, wherein the guide engagement members are blocks coupled to the lateral edges of the curtain at approximately the same height as the elastic member.

25. The device of claim 20, and including a second elastic member coupled to the curtain for movement therewith and extending laterally across the curtain such that the second elastic member can be stretched between the restricted guide engagement members.

26. A roll-up closure device adapted to be disposed adjacent a door opening and movable between blocking and unblocking position relative thereto, and comprising:

- a roller adapted to be rotatably mountable adjacent an upper end of the door opening;

- a curtain adapted to be secured at a top end thereof to the roller whereby rotation of the roller causes the curtain to wind or unwind from the roller to move between unblocking and blocking positions, respectively;

- guide members adapted to be disposed at the lateral sides of the door opening; and

- laterally inwardly biasing means for maintaining the curtain taut, and for allowing the curtain to yield depth-wise for an applied force, wherein the laterally inwardly biasing means is movable with the curtain between the blocking and unblocking positions.

27. The device of claim 26, wherein the laterally inward biasing means comprises:

- guide engagement members couplable to lateral edges of the curtain for movement therewith and engageable with the guide members to restrict their movement toward the curtain center; and

- a discrete elastic member coupled to the curtain for movement therewith and extending laterally across the curtain, and disposed such that the elastic member can be stretched between the restricted guide engagement members.